International Journal of Botany
and Research (IJBR)
ISSN (P): 2277–4815; ISSN (E): 2319–4456
Vol. 12, Issue 1, Jun 2022, 25–32

TRANS STELLAR
•Journal Publications •Research Consultancy

ETHNOMEDICINAL INVESTIGATION ON TRIBES OF RAMPA HILLS, EAST GODAVARI DISTRICT, ANDHRA PRADESH, INDIA

M.V. VIDYULLATHA, N. MADHURI, S. MATYARAJU & S. B. PADAL

Department of Botany, Andhra University, Visakhapatnam-530003, Andhra Pradesh, India

ABSTRACT

We conducted an ethnomedical survey among tribal residents living in Rampa hills, East Godavari district, Andhra Pradesh. According to the ethnomedicinal survey, a total of 102 species of plants belonging to 89 genera and 37 families have been identified. Various traditional healers, tribal doctors, and old women of the tribal society were interviewed for this research. In the present study, 102 species were used to treat 42 different ailments/diseases, either individually or in combination. This study revealed that plants were used in unconventional ways by the tribal person, which demonstrates a revival of interest in traditional medicine.

KEYWORDS: Ethnomedicine, Tribes, Rampa hills & East Godavari District.

Received: Jan 20 2022; **Accepted**: Feb 10, 2022; **Published**: Feb 28, 2022; **Paper Id.**: IJBRJUN202204

Original Article

INTRODUCTION

S.K. Jain began conducting in-depth subject research in the tribal regions of central India in 1960. (Jain, 1963 a-c; 1964 a-b 1965 a-b). Singh et al. (1981) identified 29 medicinal plants that were commonly used by local tribes in the Mannanur woodland and investigated their organic activity. According to Rama Rao et al. (1984), there are seven obscure or little-known medicinal herbs that can be completely employed for a variety of ailments by aboriginals. Hemadri (1985) investigated the Chittoor district's medicinal resources. Prakasa Rao and Harasreeramulu (1985) gave detailed information on fifty-two medicinal plants, including ethnobotanical applications and distribution in Srikakulam. The ethnomedicinal practices of the Jatapu and Savara tribal groups were documented by Rama Rao and Henry (1996). On the one hand, India's vegetation is diverse, while on the other, it is rich in endemic taxa. These components are essential for ethnomedicine's diversity as well as its distinctiveness (Jain, 1997). Ethnobotanical research has led to the identification of a vast number of wild plants used by tribals to suit a variety of needs (Anonymous, 1990). Over eighty million tribals from approximately 550 tribal groups live in India. Approximately 17,500 angiospermic species are estimated to exist in India alone (Jain, 2000). The ethnomedicinal herbs used by tribal people in Visakhapatnam's Paderu division were reported by Padal et al., 2010. The present investigation mainly aims at collecting, identifying and documenting the plants used by tribal communities.

STUDY AREA

Ramp Chodavaram is situated at 17.4500°N 81.7667°E. The average elevation is 162 meters (534 feet). There is nothing better than traveling by road to Rampachadavaram, which is known for its dense jungle and waterfalls. Compared to the Koyas, the Reddis, who constitute the majority of the Rampa Agency's population, are a more cultured and tolerant people. Their social rank is higher than the Koya's, so they are more likely to mix with

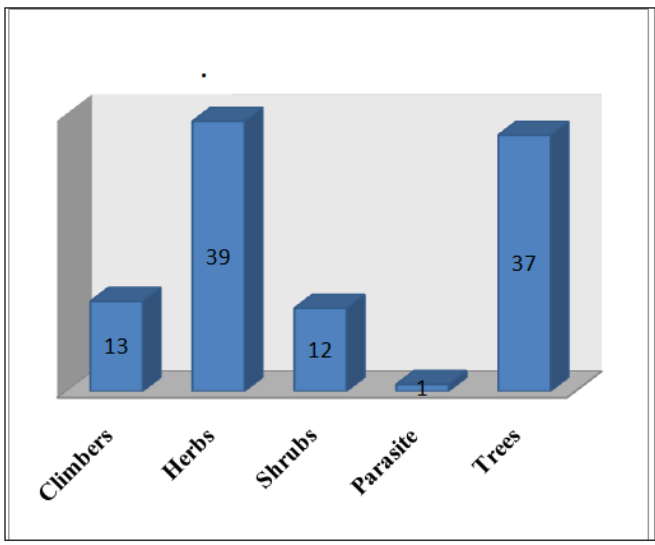
low-status men. For the hills, the dominant trees are *Anogeissus latifolia, Bambusa arundinacea, Cleistanthus collinus,* and soft woods. On the hilltops, you can see twisted and stunted Dalbergia latifolia. Superior species, such as *Sterculia urens* and *Cochlospermum religiosum*. In Rampa, at least 80% of the land is covered with forest, while the remainder is used for agriculture, either shifting or permanent.

MATERIAL AND METHODS

Jones (1941), Schultes (1960, 1962), and Jain (1989) provided concepts and methodologies for ethnomedicinal research, which were followed. The focus was mostly on rigorous field work in a few tribal enclaves. Interviews, conversations, and personal observations were used to gather ethnobotanical data (Jain and Rao 1997, Jain 1981). The ethnomedicinal data given here are the result of a one-and-a-half-year series of rigorous field studies in 34 interior tribal pockets with good forest cover in the study area. Representative taxa were gathered, identified using floras (Pullaiah and Rao, 2002, Pullaiah and Ramamurthy, 2002; Pullaiah, Ramamurthy, and Karuppusamy, 2007), and herbarium was prepared and voucher specimens were deposited in the Department of Botany, Andhra University, Visakhapatnam.

RESULT AND DISCUSSION

During exploratory expeditions, 102 species of plants belonging to 89 genera and 37 families, utilised by tribals in daily life, were evaluated for their medicinal value. (Table. 1). The local inhabitants employ trees (36.27 %), herbs (38.24 %), climbers (12.75 %), shrubs (11.76%), and parasites (0.98 percent) according to the current survey (Fig. 1). There are several different plant parts used for medicinal purposes. The root comprises the highest percentage (30.39 %), followed by leaves (19.61 %), stem bark (13.73 %), whole plant (6.83 %), seeds (4.90 %), tubers (1.96 %), fruit (3.92 %), roots (3.92 %), flowers (1.96 %), latex (1.96%) rhizomes (2.94 %), stem and inflorescence (0.98 %) (Fig,2).



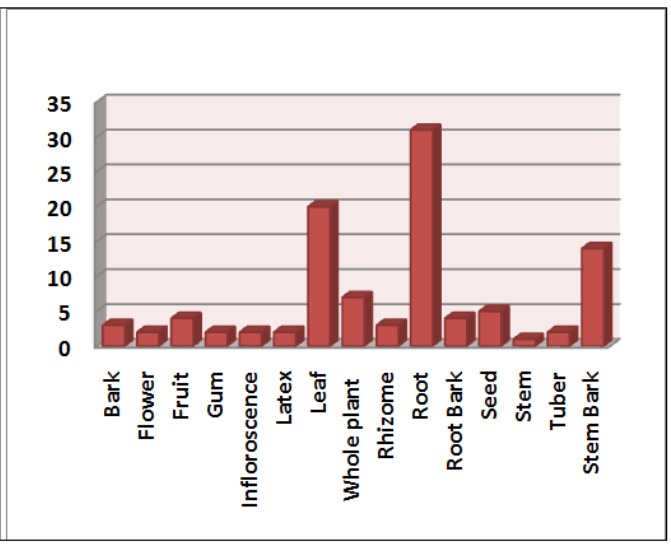


Figure 1: Habit Wise Analysis of Ethnomedicinal Plants **Figure 2: Parts Wise Analysis of Ethnomedicinal Plants**

One hundred and two species reported in the present study are used in curing 42 different ailments/diseases either single or in combination. For Asthma (12) plant species were used followed by Diarrhoea (9), Dysentery (5), Anthelmintic (4), Leucorrhoea (4), Boils (4), Abortion (3), Bone fracture (3), Cold (3), Cough (3), Cuts (3), Fever (3), Headache (3), Jaundice (3), Rheumatism (3), Stomach pain (3), Acidity (2), Antifertility (2), Chest pain (2), Dysmenorrhoea (2),

Dyspepsia (2), Epilepsy (2), Gonorrhoea (2) and remaining 18 ailments are single species. The medicine-men or healers of the traditional healthcare system play an important role in the study area. Rural healthcare practices rely heavily on these traditional healers.

The present study for jaundice *Phyllanthus amarus, Ixora pavetta* and *Solanum surattense* were used by local tribes of Rampa hills. To treat jaundice Borthakur *et al*. (1996) observed the leaf of *Kalanchoe pinnata* and leaf of *Aloe vera* for curing jaundice in northeast India. In the present study, for curing Rheumatoid arthritis, *Litsea glutinosa* and *Curcuma longa* plant species were used. According to Katewa and Sharma (1998), 15 plant species belonging to 11 families and 15 genera were used by rural people of Udaipur to treat rheumatoid arthritis, Rajsamand, and Jothipur districts of Rajasthan. The rural people of the Chhatrapur district of Madhya Pradesh used 21 medicinal plants to treat rheumatism, according to Khare and Khare (1999).

CONCLUSIONS

There were numerous data about the suitable indication of each plant in the information acquired. Only if we ensure adequate conservation of these endangered species can we utilise this enormous diversity of uncommon medicinal herbs for further research. Thus, before selecting which type of screening should be employed in the search for medications for various ailments that may also be a possible source of current drug industries, researchers should include ethnomedical knowledge. Validating these remedies scientifically may lead to the discovery of new drugs from ethnomedicinal plant species. It may be possible to discover novel drugs using the information about the therapeutic uses of plants and promote a better understanding of how these plants can be used in the health care system.

ACKNOWLEDGEMENT

The authors are thankful to the Forest Department and the tribal people who live in the study area for allowing us to conduct field research there.

REFERENCES

1. *Anonymous, (1990). Ethnobiology in India: A Status Report. Ministry of Environment and Forests, Govt. of India, New Delhi. Pp.1-68.*
2. *Borthakur, S.K., K. Nath and P. Gogoi (1996). Herbal remedies of the Nepalese of Assam. Fitoterapia 67: 231-237.*
3. *Hemadri, K. (1985). Medicinal plant wealth of Chittoor district, India. Indian Medicine 34: 13-15.*
4. *Jain, S.K. (1963a). Studies in Indian Ethnobotany-less known uses of fifty common plants from the tribal areas of Madhya Pradesh. Bull. Bot. Surv. India 5: 223-226.*
5. *Jain, S.K. (1963b). Observations on Ethnobotany of the tribals of Madhya Pradesh. Vanyajati 11: 177-183.*
6. *Jain, S.K. (1963c). Studies in Indian Ethnobotany – Plants used in medicine by the tribals of Madhya Pradesh. Bull. Reg. Res. Lab., Jammu 1: 126-128.*
7. *Jain, S.K. (1964a). The role of a botanist in folklore research. Folklore 5: 145-150.*
8. *Jain S.K. (1964b). Wild plant foods of the tribals of Bastar. Khadi Gramodyog 10: 557-561.*
9. *Jain, S.K. (1965a). The medicinal plant-lore of the tribals of the Bastar. Econ. Bot. 19: 236-250.*
10. *Jain, S.K. (1965b). Wooden musical instruments of the Gonds of Central India. Ethnomusicology 9: 39-42.*

11. *Jain, S.K. (2000). Global resurgence of ethnomedicobotany-The Indian Scene. J. Trop. Med. Plants 1: 75-81.*
12. *Jain, S. K., (Ed.) (1989), Methods and approaches in Ethnobotany, Society of Ethnobotanists, Lucknow*
13. *Jain S.K and Rao R.R 1977. Hand book of Field and Herbarium methods. Today and Tomorrow publishers, New Delhi.*
14. *Jain S.K (1981). Glimpses of Indian Ethnobotany. Oxford and IBH Publishing Co, New Delhi, 1-134.*
15. *Jain, S.K. and R. Mitra (1997). Ethnobotany in India: Retrospect and prospect. In: S.K. Jain (Ed.) Contribution to Indian Ethnobotany pp 1-15.*
16. *Johne, S., Groeger, D. & Hesse. (1941), Alkaloids. 142. New alkaloids from Adhatoda Vasica. Helv. Chem. Acta. 54:826*
17. *Katewa, S.S. and R.Sharma (1998). Ethonobotanical observations from certain water shed areas of Rajasthan. Ethnobotany 13: 129-134.*
18. *Khare, P. K. and L. J. Khare (1999). Plants used in rheumatism by rural people of Chhatrapur district, Madhya Pradesh, India. J. Econ. Taxon. Bot. 23: 301-304.*
19. *Prakasa Rao, K. and S.Harasreeramulu (1985). Ethnobotany of selected medicinal plants of Srikakulam district, Andhra Pradesh. Ancient Science Life 4: 238-244.*
20. *Pullaiah, T., & Ramamurthy, K.S (2002). Flora of Eastern Ghats: Hill ranges of South East India (Vol. 2). New Delhi: Regency Publications.*
21. *Pullaiah, T., Ramamurthy, K.S., & Karuppusamy, S (2007). Flora of Eastern Ghats: Hill ranges of South East India (Vol. 3). New Delhi: Regency Publications.*
22. *Pullaiah, T., & Rao, D.M (2002). Flora of Eastern Ghats: Hill ranges of South East India (Vol. 1). New Delhi: Regency Publications.*
23. *Rama Rao, N., P. V. Sreekumar and A. N. Henry (1984). Ethnobotanical studies in Andhra Pradesh. Proc. 2nd Annual workshop on MAB Projects. 20-82, DOEn, New Delhi.*
24. *Rama Rao, N. and A. N. Henry (1996). The Ethnobotany of Eastern Ghats in Andhra Pradesh, India. Botanical Survey of India, Calcutta.*
25. *Singh K. K., S. K. Palvi and H. B. Singh (1981). Survey and biological activity of some medicinal plants of Mannanur forest, Andhra Pradesh. Ind. J. Forestry 4: 115-118.*
26. *S.B. Padal, P. Prayaga Murty*, D. Srinivasa Rao and M. Venkaiah (2010). Ethnomedicinal Plants from Paderu Division of Visakhapatnam District, A.P, India. J Phytol 2(8): 70-91.*
27. *Schultes RE (1960). Tapping our heritage of ethnobotanical lore. Economic Botany; 14: 257-262.*
28. *Schultes, R. E (1962). Tapping our heritage of ethnobotanical lore. Econ. Bot. 14: 257-262.*
29. *Vijayakumar, subramaniyan, sellan. Chandrasekar, and Srinivasan Prabhu. "Screening of ethnomedicinal plants for antibacterial activity." International Journal of Medicine and Pharmaceutical Sciences 3.2 (2013): 11-20.*
30. *Choudhury, Sutapa, et al. "Folk-lore knowledge on medicinal usage of the tribal belts of Birbhum district, West Bengal, India." International Journal of Botany and Research, ISSN (2013): 2277-4815.*
31. *Mehta, Jyoti, and Shah Shahista. "Studies on the screening of phytochemical, antioxidant and antibacterial activities of certain medicinal plants of Kashmir." International Journal of Biological Research and Development 9.2 (2021): 1-14.*

32. *Sneha, Sacchi, S. Maurya, and A. K. Choudhary. "Antifungal efficacy of garli and ginger against Sclerotium rolfsii." International Journal of Agricultural Science and Research 6.6 (2016): 419-424.*

Table 1: Ethnomedicinal Plants used by Tribes of Rampa Hills, East Godavari District

S.No	Botanical Name	Common name	Habit	Parts	Disease
1	*Andrographis paniculata* (Burm.f.) Nees	Nelavemu	Herb	Stem	Asthma
2	*Elytraria acaulis* (L.f.) Lindau	Kukkapan	Herb	Root	Anasarca
3	*Justicia adhatoda* L.	Addasaramu	Shrub	Leaf	Cough
4	*Adiantum lunulatum* Burm. f.	Gatumandu	Shrub	Leaf	Abortion
5	*Hemionitis arifolia* (Burm. f.) T. Moore	Ramabanam	Herb	Plant	Digestive tonic
6	*Alangium salviifolium* (L.f.) Wangerin	Uduga	Tree	Leaf	Rheumatism
7	*Achyranthes aspera* L.	Uttareni	Herb	Seed	Mental disorders
8	*Aerva lanata* (L.) Juss.	Pindikura	Herb	Root	Headache
9	*Amaranthus spinosus* L.	Mullathotakura	Herb	Root	Dyspepsia
10	*Buchanania lanzan* Spreng.	Sarepappu	Tree	Stem Bark	Boils
11	*Lannea coromandelica* (Houtt.) Merr.	Gumpena	Tree	Stem Bark	Cuts
12	*Mangifera indica* L.	Mamidi	Tree	Gum	Boils
13	*Semecarpus anacardium* L.f.	Nalla jeedi	Tree	Seed	Swellings
14	*Annona squamosa* L.	Sitapalam	Tree	Root	Abortion
15	*Polyalthia cerasoides* (Roxb.) Bedd.	Asoka	Tree	Gum	Chest pain
16	*Centella asiatica* (L.) Urb.	Saraswathi Aku	Herb	Leaf	Anaemia
17	*Alstonia venenata* R.Br.	Edakulapala	Shrub	Stem Bark	Anthelmintic
18	*Holarrhena pubescens* Wall. ex G.Don	Palakodisa	Shrub	Bark	Asthma
19	*Ichnocarpus frutescens* (L.) W.T.Aiton	Palateega	Climber	Root	Epilepsy
20	*Rauvolfia serpentina* (L.) Benth. ex Kurz	Pathalagaridi	Herb	Root	Fever
21	*Rauvolfia tetraphylla* L.	Pathalagaridi	Herb	Root Bark	Blood pressure
22	*Wrightia tinctoria* R.Br.	Ankudu	Tree	Latex	Asthma
23	*Acorus calamus* L.	Vasa	Herb	Rhizome	Cold
24	*Amorphophallus paeoniifolius* (Dennst.) Nicolson	Adavikandha	Herb	Corm	Bone fracture
25	*Arisaema tortuosum* (Wall.) Schott	Dhamma saaru	Herb	Tuber	Headache
26	*Caryota urens* L.	Jeeluga	Tree	Inflorescence	Aphrodisiac
27	*Phoenix sylvestris* (L.) Roxb.	Chiitieetha	Tree	Root	Asthma
28	*Aristolochia indica* L.	Gadidagadapaku	Climber	Root	Diarrhoea
29	*Calotropis gigantea* (L.) Dryand.	Jilledu	Shrub	Root	Stomach pain
30	*Cryptolepis buchananii* Roem. & Schult.	Palabaddu	Climber	Root	Diarrhoea
31	*Gymnema sylvestre* (Retz.) R.Br. ex Sm.	Podapatri	Climber	Root	Cobrabite
32	*Hemidesmus indicus* (L.) R. Br. ex Schult.	Sugandhipala	Climber	Root	Diarrhoea
33	*Pergularia daemia* (Forssk.) Chiov.	Dustaputeega	Climber	Leaf	Bone fracture
34	*Tylophora indica* (Burm. f.) Merr.	Mekameyaniaaku	Climber	Leaf	Asthma
35	*Eclipta prostrata* (L.) L.	Guntagalagaraku	Herb	Whole plant	Acidity
36	*Elephantopus scaber* L.	Nelamarri	Herb	Root	Anthelmintic

37	*Tridax procumbens* (L.) L.	Gaddichamanthi	Herb	Leaf	Cuts
38	*Vernonia cinerea* (L.) Less.	Sahadevi	Herb	Seed	Leucorrhoea
39	*Xanthium strumarium* L.	Marulamatangi	Herb	Root	Boils
40	*Barringtonia acutangula* (L.) Gaertn.	Kadapa Chettu	Tree	Leaf	Headache
41	*Oroxylum indicum* (L.) Kurz	Pampinacettu	Tree	Root Bark	Antifertility
42	*Bombax ceiba* L.	Buruga	Tree	Leaf	Leucorrhoea
43	*Coldenia procumbens* L.	Hamsapadu	Herb	Whole plant	Cuts
44	*Garuga pinnata* Roxb.	Kambha	Tree	Stem Bark	Stomach pain
45	*Bauhinia racemosa* Lam.	Arichettu	Tree	Stem Bark	Asthma
46	*Bauhinia vahlii* Wight & Arn.	Addaku	Climber	Root	Dysentry
47	*Caesalpinia bonduc* (L.) Roxb.	Gachakaya	Shrub	Seed	Abortion
48	*Cassia absus* L.	Chanupala vittulu	Herb	flower	Asthma
49	*Cassia alata* L.	Tamaramokka	Herb	flower	Asthma
50	*Cassia occidentalis* L.	Kasinta	Herb	Root	Anthelmintic
51	*Tamarindus indica* L.	Chinta	Tree	Bark	Asthma
52	*Capparis zeylanica* L.	Aridonda	Shrub	Root Bark	Earache
53	*Terminalia arjuna* (Roxb. ex DC.) Wight	Tellamaddi	Tree	Bark	Asthma
54	*Terminalia bellirica* (Gaertn.) Roxb.	Thanechettu	Tree	fruit	Asthma
55	*Terminalia chebula* Retz.	Karakaya	Tree	fruit	Cough
56	*Dioscorea bulbifera* L.	Chedhadumpa	Climber	Root	Sterility
57	*Diospyros chloroxylon* Roxb.	Bheedi	Tree	Leaf	Diarrhoea
58	*Diospyros melanoxylon* Roxb.	Thumiki	Tree	Stem Bark	Cold
59	*Euphorbia hirta* L.	Pachabottlu	Herb	Leaf	Dysentry
60	*Jatropha curcas* L.	Nepalam	Shrub	Latex	Burns
61	*Mallotus philippensis* (Lam.) Müll.Arg.	Sindhuram	Tree	fruit	Anthelmintic
62	*Phyllanthus amarus* Schumach. & Thonn.	Nelausiri	Herb	Plant	Jaundice
63	*Phyllanthus emblica* L.	Usirichettu	Tree	Leaf	Bone fracture
64	*Dalbergia latifolia* Roxb.	Iridi	Tree	Stem Bark	Fever
65	*Desmodium gangeticum* (L.) DC.	Seetammajada	Herb	Leaf	Acidity
66	*Erythrina suberosa* Roxb.	Mulla moduga	Tree	Root	Dysentry
67	*Mucuna acuminata* Baker	Dhulagondi	Climber	Root	Dysmenorrhoea
68	*Pongamia pinnata* (L.) Pierre	Kanuga	Tree	Leaf	Cough
69	*Pterocarpus marsupium* Roxb.	Yegisa	Tree	Stem Bark	Conception
70	*Pueraria tuberosa* (Willd.) DC.	Gummuduteega	Climber	Root	Ulcers
71	*Tephrosia hirta* Bojer	Vempali	Herb	Root	Fever
72	*Zornia diphylla* (L.) Pers.	Malam mokka	Herb	Whole plant	Diarrhoea
73	*Leonotis leonurus* (L.) R.Br.	Ranabheri	Herb	Inflorescence	Breast pain
74	*Ocimum basilicum* L.	Thulasi	Herb	Seed	Diarrhoea
75	*Ocimum tenuiflorum* L.	Krishna Tulasi	Herb	Leaf	Conjuctivitis
76	*Orthosiphon rubicundus* (D.Don) Benth.	Nela tappidi	Herb	Root	Diarrhoea
77	*Cassytha filiformis* L.	Savaralu	Parasite	Whole plant	Hydrocele

78	*Litsea glutinosa* (Lour.) C.B.Rob.	Naramamidi	Tree	Stem Bark	Rheumatism
79	*Sida acuta* Burm.f.	Ganneru	Herb	Root	Boils
80	*Soymida febrifuga* (Roxb.) A. Juss.	Somida	Tree	Root	Dysmenorrhoea
81	*Azadirachta indica* A.Juss.	Vepa	Tree	Leaf	Allergy
82	*Mimosa pudica* L.	Nidraganneru	Herb	Root	Epilepsy
83	*Xylia xylocarpa* (Roxb.) Taub.	Kondatangedu	Tree	Root	Gonorrhoea
84	*Ficus benghalensis* L.	Marri	Tree	Leaf	Boils
85	*Ficus racemosa* L.	Juvvi	Tree	Stem Bark	Diarrhoea
86	*Streblus asper* Lour.	Rugechettu	Tree	Stem Bark	Diarrhoea
87	*Naravelia zeylanica* (L.) DC.	Pullabatchala	Climber	Leaf	Cold
88	*Ziziphus abyssinica* Hochst. ex A.Rich.	Parimi	Climber	Root	Chest pain
89	*Ziziphus rugosa* Lam.	Konda Regu	Tree	Leaf	Diabetes
90	*Adina cordifolia* (Roxb.) Hook. f.	Kambachettu	Tree	Stem Bark	Leucorrhoea
91	*Ixora pavetta* Andr.	Ramabanam	Shrub	Stem Bark	Jaundice
92	*Pavetta indica* L.	Papidi	Shrub	Leaf	Blisters
93	*Rubia cordifolia* L.	Mangalikatthi	Herb	Root	Stomach pain
94	*Tarenna asiatica* (L.) Kuntze ex K.Schum.	Kommi	Shrub	Stem Bark	Dysentry
95	*Datura stramonium* L	Ummeta	Shrub	Root	Asthma
96	*Solanum nigrum* L.	Kamanchi	Herb	Whole plant	Gonorrhoea
97	*Solanum surattense* Burm. f.	Mullavnga	Herb	Root Bark	Jaundice
98	*Helicteres isora* L.	Chamalanara	Shrub	Fruit	Dysentry
99	*Sterculia urens* Roxb.	Kovelachettu	Tree	Root	Antifertility
100	*Curcuma longa* L.	Pasupu	Herb	Rhizome	Rheumatism
101	*Zingiber officinale* Roscoe	Allamu	Herb	Rhizome	Dyspepsia
102	*Zingiber roseum* (Roxb.) Roscoe	Adaviallum	Herb	Root	Leucorrhoea